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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,755	04/14/2004	Chia-Hung Liang	MR1345-728	5071
4586	7590	05/26/2005	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			WEST, PAUL M	
			ART UNIT	PAPER NUMBER

2856

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/823,755	LIANG ET AL.	
	Examiner	Art Unit	
	Paul M. West	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, there appears to be a preposition missing in line 16 between the words "mounted" and "said". It is unclear in what configuration the float is mounted to the detection tube. Also, in line 5 on the second page of the claims, "the screw hole" lacks antecedent basis in the claim. It is unclear what "hole" this refers back to.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liang (6,185,994) in view of Liang (5,718,146).

As to claim 1, Liang (6,185,994) teaches a level sensor comprising: a mounting base 1 comprising a center mounting hole 121, and a through hole extended through top and bottom walls thereof at an eccentric location (not numbered, see Fig. 2); a

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detection tube 2 having a top end attached to the mounting hole 121 of said mounting base 1 and a bottom end; a detection circuit 4 mounted inside said detection tube 2; an end cap 21 comprising a center stem (not numbered, see Fig. 1) press-fitted into the bottom end of said detection tube; a float 123 mounted on said detection tube 2 and movable along said detection tube 2 between said end cap 21 and said mounting base 1, said float 123 having two magnets 1231 symmetrically disposed at two sides (see Fig. 1) and adapted to induce said detection circuit (Col. 2, lines 30-33). Liang (6,185,994) does not teach the mounting base having an endless locating flange that perpendicularly protrudes from its bottom wall, a strainer with a plurality of through holes attached to the endless locating flange, nor a strainer cover with a peripheral flange attached the bottom end of the strainer. Also, Liang (6,185,994) is silent as to the manner in which the parts are attached to each other and type of material used for the apparatus. Liang (5,718,146) teaches a level sensor which comprises: a strainer 3 having a top end attached to a mounting base 1, a plurality of through holes 31 evenly distributed over the its periphery, and a bottom end; and a strainer cover 33 with a peripheral flange (not numbered, see Fig. 1) capped on the bottom end of the strainer 3.

It would have been obvious to one of ordinary skill in the art to use the strainer and strainer cover of Liang (5,718,146) with the level sensor of Liang (6,185,994) because a strainer would prevent larger solid particles from interfering with the level sensing equipment. Also, with the use of a strainer it would have been obvious to use a perpendicularly protruding flange on the mounting base as this is a very common way to fit such parts together, and it also would have been obvious to use a screw to attach the

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strainer cover to the base of the end cap on the detection tube because this would hold the entire sensor body more rigidly in place but would also allow for removal of the strainer cover if necessary. It would have been obvious to use stainless steel for the various parts of the apparatus because it is a strong, corrosion-resistant material that is commonly used for this reason. It would have been further obvious to connect the pieces by welding because this is a common way to join parts made of metal and it ensures a rigid and more permanent attachment.

#### ***Allowable Subject Matter***

Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note that Tice teaches a level sensor using a magnetic float. Note that Poole teaches a level sensor with a strainer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul M. West whose telephone number is (571) 272-8590. The examiner can normally be reached on Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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